

APPENDIX X

Serial No.: 09/955,064

Docket No.: 49933US032

Examiner's Answer mailed from the U.S. Patent and Trademark Office on January
14, 2003.



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Paper No. 11

Application Number: 09/955,604
Filing Date: September 19, 2001
Appellant(s): HOOPMAN ET AL.

MAILED
JAN 14 2003
GROUP 1700

Ann M. Mueting
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 23, 2002.

(1) *Real Party in Interest*

Art Unit: 1722

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The appellant's statement that there are no appeals or interferences known to appellant's representatives which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

Note that this application is a continuation of U.S. Application No. 09/520,032 and that U.S. Application No. 09/520,032 is currently on appeal to the Board of Patent Appeals and Interferences.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is substantially correct. However, one further issue is missing.

Art Unit: 1722

The changes are as follows: addition of the following third issue to the two issues already listed.

3. Whether claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143 and 145-148 are properly provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17, 20, 21, 25-28, 33-54, 94-96 and 98-111 of copending Application No. 09/520,032 in view of Rochlis(-583).

(7) Grouping of Claims

The appellant's statement that claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143 and 145-148 stand or fall together is acknowledged.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

3,312,583

ROCHLIS

4-1967

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 23, 30, 31, 89, 92, 134-136, 138-143 and 145-148 stand rejected under 35 U.S.C. 102(b) as being anticipated by Rochlis(-583). Rochlis(-583) teaches a production tool suitable

Art Unit: 1722

for use in manufacturing an abrasive article (col. 1, lines 50-56) which includes a plurality of cavities having different geometric shapes, angles and dimensions. Note that some of the shapes have at least four planar surfaces wherein adjacent planar surfaces of one cavity meet at an edge to define an angle of intersection therebetween (see figures). The production tool can be a coating roll (fig. 19) or an etched (engraved) metal roll (col. 3, lines 52-63; col. 13, lines 15-17 and 62-67). The production tool can have parallel rows of cavities as shown in figs. 21 and 22 with a first plurality of rectangular cavities, a second plurality of circular cavities, and a third plurality of triangular cavities. At least one of the angles or base edge lengths of the first plurality is different from all the angles or base edge lengths of the second plurality and of the third plurality. At least one of the angles or base edge lengths of the second plurality is different from all the angles or base edge lengths of the first plurality and of the third plurality. Rochlis(-583) discloses that the cavities of the production tool can have different sizes (col. 2, lines 66-70; col. 6, lines 17-22; col. 9, line 61, to col. 10, line 52; col. 13, lines 62-66; i.e., different heights). Rochlis(-583) discloses that the cavities and products can have pyramidal or truncated pyramidal shapes (i.e., figs. 10-13; col. 13, lines 51-58). Rochlis(-583)

Art Unit: 1722

discloses that the production tool can have a plurality of different shapes of cavities (col. 3, lines 25-29; col. 6, lines 17-22; col. 11, lines 56-66; col. 11, line 75, to col. 12, line 4; col. 13, lines 29-35 and 62-66; figs. 21 and 22). Figs. 21 and 22 show a first row of cavities with a rectangular cross section which defines a first base edge length extending parallel to the first row and a second base edge length extending perpendicular to the first row, wherein the second base length of all the cavities in the first row is the same (of course they also can be different sizes as mentioned above), and show a first rectangular cavity adjacent a second circular cavity, the second circular cavity being adjacent a third triangular cavity. Each of the cavities has a single opening. Furthermore, Rochlis(-583: col. 3, lines 40-46) discloses that "most embodiments" permit air or other evolved gas to escape, and Rochlis(-583: col. 13, lines 70-75) discloses that evolved air or gas "may" escape between mating surfaces of the laminated layers. Thus, in the embodiments (in opposition to "most embodiments") where there are no openings to permit air or other evolved gas to escape, each cavity has a single opening.

Claims 23, 24, 31, 32, 89, 90, 92, 93, 134-136, 138-143 and 145-148 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rochlis(-583). The 102 rejection above is

Art Unit: 1722

based upon the interpretation of the alternatives for the production tool disclosed by Rochlis(-583) as being anticipatory. If appellants believe that the disclosed alternatives are NOT anticipatory, then it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the production tool of Rochlis(-583) with the alternatives disclosed by Rochlis(-583) because Rochlis(-583) explicitly discloses that the production tool can be modified with such disclosed alternatives. Rochlis(-583) discloses a production tool, as mentioned above, having 3 different types or shapes of cavities defining three pluralities or groups of cavities (figs. 21 and 22), but does NOT explicitly disclose a fourth plurality or group of cavities having a fourth different type of cavity. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the production tool to have four pluralities or group of cavities having four different types of cavity because Rochlis(-583) discloses that the production tool can have a plurality of different types (shapes and/or sizes) of cavities and/or because Rochlis(-583: figs. 21 and 22) discloses a production tool example having not just two but three pluralities or groups of cavities having three different types of cavities (i.e., that a tool can have a plural number of

Art Unit: 1722

groups of cavities having different types of cavities to produce a plural number of groups of products having different types of products). Note that different shapes will read on the respective instant claims. For example, if the three different types had cross sections of a square, a pentagon, and a hexagon, then each of the cavities would have a boundary defined by at least four surfaces wherein adjacent planar surfaces of one cavity meet at an edge to define an angle of intersection therebetween, wherein the at least one angle of intersection of the first cavity is different from all the angles of the second and third cavities, and wherein at least one angle of intersection of the second cavity is different from all the angles of intersection of the first and third cavities. Various different types would also provide different base edge lengths.

Claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143 and 145-148 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17, 20, 21, 25-28, 33-54, 94-96 and 98-111 of copending Application No. 09/520,032 in view of Rochlis(-583). Claims 17, 20, 21, 25-28, 33-54, 94-96 and 98-111 of copending Application No. 09/520,032 disclose the production tool substantially as instantly claimed. Rochlis(-583) discloses a production tool as mentioned above. It would have

Art Unit: 1722

been obvious to one of ordinary skill in the art, at the time of the invention, to modify the production tool of claims 17, 20, 21, 25-28, 33-54, 94-96 and 98-111 of copending Application No. 09/520,032 such that the cavities have a first, second, third, or more plurality of cavities, each plurality having a different shape because such a modification would produce a product having a first, second, third, or more plurality of different shapes on the product as disclosed by Rochlis(-583). Note that the possible different shapes and combinations thereof disclosed by Rochlis(-583) would provide the dimensions, planar surfaces, angles, edges, boundaries and shapes as recited by the instant claims. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

(11) Response to Argument

Appellants argue that claims 23, 30, 31, 89, 92, 134-136, 138-143 and 145-148 are not anticipated under 35 U.S.C. 102(b) by Rochlis(-583).

Appellants argue that Rochlis(-583) does not disclose every element of the claimed invention, particularly each of the cavities having a single opening, and that Rochlis(-583: col. 3, lines 40-49) requires the mold to have a laminate construction with multiple openings (i.e., openings between the laminate

Art Unit: 1722

layers in addition to the openings through which mold material enters the cavity), the openings between the laminate layers allowing air or gas from the mold material to escape. The examiner agrees that there are multiple openings: openings between the laminate layers which define vent openings in addition to openings receiving the molding material which define mold cavity openings. Clearly, the vent openings do not perform any shaping function and thus are NOT part of the cavity. Each cavity has a single opening which defines the cavity.

Appellants further traverse the assertion (by the examiner) that the vent openings are not part of the mold cavities. It appears that appellant's arguments are not corresponding to what is actually claimed. Each of the cavities having a single opening does NOT negate the mold from having other non-cavity openings. Again, as mentioned above, the vent openings do not perform any shaping function and thus are NOT part of the molding cavity. Furthermore, if the vent openings were a part of the mold cavity, then wouldn't the mold material flow into the vent openings to also escape from the mold. Clearly, appellants interpretation of Rochlis(-583) that the mold cavities include the vent openings is incorrect. The vent openings are NOT a part of the cavity.

Art Unit: 1722

Appellants further traverse the examiner alleging that Appellants (instant claims language) do not preclude multiple openings in the instant claims. Appellants argue that single is defined as "one only; only one in number". Note that the instant claim language requires each of the cavities to have a single cavity, and thus each cavity has one opening only, only one opening in number. Rochlis(-583) discloses that each cavity has a single cavity opening, whereas the mold or production tool has vent openings in addition to the cavity openings. Thus, each of the cavities having a single opening does not preclude the mold or production tool from having other openings.

Appellants argue that there is no disclosure in Rochlis(-583) of mold constructions without openings between the laminate layers. The examiner disagrees. Rochlis(-583: col. 3, lines 40-46) discloses that "most embodiments" permit air or other evolved gas to escape, and Rochlis(-583: col. 13, lines 70-75) discloses that evolved air or gas "may" escape between mating surfaces of the laminated layers. Thus, in the embodiments (in opposition to "most embodiments") where there are no openings to permit air or other evolved gas to escape, each cavity has a single opening.

Appellants argue that Rochlis(-583) does not contain an enabling disclosure. Appellants argue that Rochlis(-583) does

Art Unit: 1722

not teach how one of skill in the art would make a production tool with even one mold cavity having a single opening. It appears that appellants are arguing that Rochlis(-583) does not have an enabling disclosure for making a mold or production tool without the vent openings. The examiner agrees that Rochlis(-583) is enabling for a laminated mold construction that includes openings between the mating surfaces of the laminations.

However, as mentioned above, in other embodiments of Rochlis(-583), the laminated mold has no openings for gas or air to escape. Thus, Rochlis(-583) is enabling for making a laminated mold or production tool without the vent openings which would define each mold cavity with a single opening.

Appellants argue that claims 23, 24, 31, 32, 89, 90, 92, 93, 134-136, 138-143 and 145-148 are not obvious under 35 U.S.C. 103(a) over Rochlis(-583).

Appellants argue that Rochlis(-583) does not teach or suggest how one of ordinary skill in the art would make a production tool with each cavity having a single opening or with a single opening in each cavity. The examiner disagrees as this is discussed at length above. Appellants argue that the Office Action fails to establish a prima facie case of obviousness. However, modifying the production tool of Rochlis(-583) with the alternatives disclosed by Rochlis(-583) has clear motivation

Art Unit: 1722

since Rochlis(-583) explicitly discloses that the production tool can be modified with such disclosed alternatives.

Appellants argue that Rochlis(-583) teaches away from the claimed invention in view of the fact that Rochlis(-583) emphasizes the importance of the openings between the mating surfaces of the laminations to allow evolved air or gas to escape. Appellants argue that one of skill would expect that a mold with only a single opening in each cavity would not be functional since the openings between the mating surfaces of the laminations allow evolved air or gas to escape. The examiner disagrees. Rochlis(-583) does NOT disclose that allowing evolved air or gas to escape is CRITICAL or REQUIRED for the apparatus to operate. Furthermore, Rochlis(-583) explicitly discloses that in some embodiments there are no openings in the laminated mold or laminated production tool allowing evolved air or gas to escape, as mentioned above.

Appellants argue that it is impermissible to use hindsight as an obviousness test. It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's

Art Unit: 1722

disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Appellants argue that the use of Rochlis(-583) alone in an obviousness rejection can only occur by the impermissible use of hindsight reasoning. The examiner disagrees that a single reference rejection can only occur by hindsight reasoning, and appellants have not given any factual evidence to support such a conclusory statement. Note that the obviousness rejection by the examiner took into account only the knowledge disclosed by Rochlis(-583) and knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from appellant's disclosure.

Appellants do NOT argue the standing provisional rejection of claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143 and 145-148 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17, 20, 21, 25-28, 33-54, 94-96 and 98-111 of copending Application No. 09/520,032 in view of Rochlis(-583). In the Summary of the Appeal Brief, appellants state that, if patentability of the instant claims is confirmed, appellants will file a Terminal Disclaimer if such rejection is maintained.

Note that Appendices II-X have been considered by the examiner. Appendices II-VII only contains copies of papers

Art Unit: 1722

already entered and considered in the application. Appendix VIII is a copy of the prior art, Rochlis(-583). Appendix IX is a dictionary citation for the definition of "single" which is the same definition used and understood by the examiner, as gleaned from the instant disclosure, throughout the prosecution of this application. Appendix X includes copies of case law cited by appellants.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Joseph Leyson

Joseph Leyson

Patent Examiner

N

j1

January 10, 2003

Conferees

Wanda Walker

Douglas McGinty

APPEAL CONFEREES

Douglas McGinty
~~DOUGLAS MCGINTY~~

QUALITY ASSURANCE SPECIALIST

TECHNOLOGY CENTER 1700

Office of Intellectual Property Counsel

3M Innovative Properties Company

P.O. Box 33427

St. Paul, MN 55133-3427

W. L. Walker

W. L. WALKER

SUPERVISORY PATENT EXAMINER

TECHNOLOGY CENTER 1700